Martian Year 34 Column Dust Climatology from Mars Climate Sounder Observations: Reconstructed Maps and Model Simulations - Supporting information

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1 Appendix on MY 34 climatology versioning

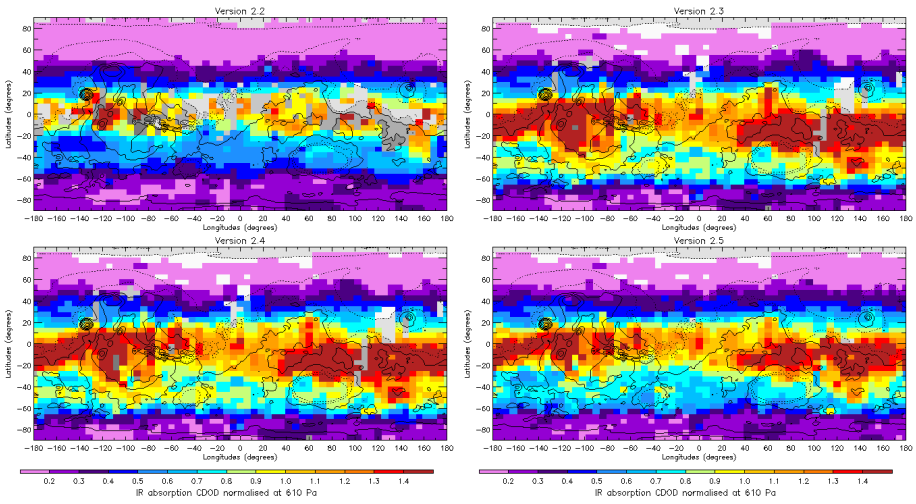

Figure 1: *Different versions of the gridded maps of 9.3 μm absorption column dust optical depth for SOY 400, $L_s \sim 196°$, in the growing phase of the Global Dust Event of MY 34. V2.2 is the top left map, v2.3 is the top right one, v2.4 is the bottom left one, and the reference v2.5 is the bottom right one. The spatial resolution of all gridded maps is 6° longitude × 5° latitude.*

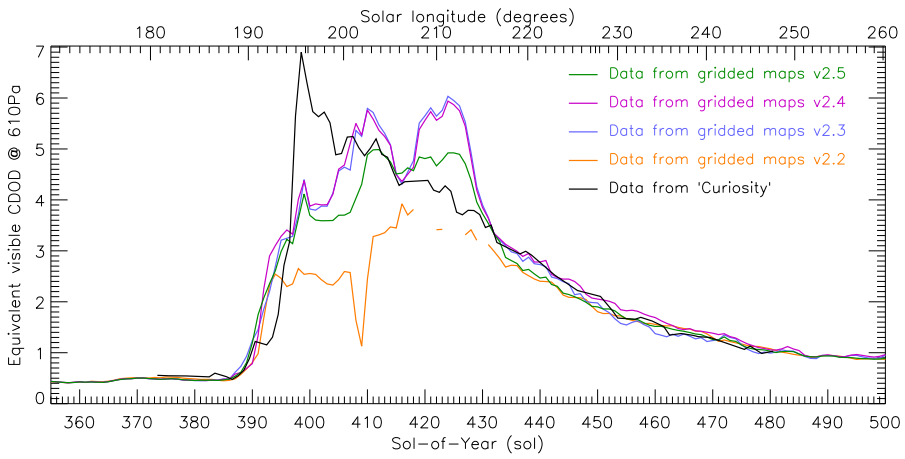

Figure 2: *Time series of equivalent visible column dust optical depth calculated from the 9.3 μm absorption CDOD normalized to 610 Pa, extracted from different versions of the gridded maps in an area around Gale crater, compared to the time series of visible column optical depth measured by MastCAM aboard NASA's "Curiosity" rover (black line). Curiosity observations [Guzevich et al., 2018, see main text] have been daily averaged and normalized to 610 Pa (using the surface pressure from the Mars Climate Database* `pres0` *routine). Both time series are shown between Sol-of-Year 355 and 500, i.e.* $L_s \sim [170°, 260°]$. *We used a factor of 2.6 to convert 9.3 μm absorption CDOD into equivalent visible ones. Data from gridded maps are averaged in longitude=[123° E, 153° E], latitude=[15° S, 10° N] centered around Curiosity landing site at longitude* 137.4° *E and latitude* 4.6° *S.*